Title (en)

Compositions useful as lubricants.

Title (de)

Zusammensetzungen, die als Schmiermittel verwendbar sind.

Title (fr)

Compositions utiles comme lubrifiants.

Publication

EP 0389967 A2 19901003 (EN)

Application

EP 90105454 A 19900322

Priority

US 32926489 A 19890327

Abstract (en)

The present invention includes an organic molecular composition including carboxylic acid functionality, ester functionality, phosphine, phosphite or phosphate extreme pressure functionality, and, in one aspect, at least one organic ether linkage within the same molecule. In another aspect, a double bond film-forming functionality is included in the molecular composition. The composition is useful as a lubricant and can be provided, in one aspect, by reacting tris-hydroxymethyl phosphine oxide or by reacting tris(oxyalkylene glycol) phosphite or phosphate with an alkyl, alkaryl, aralkyl, or alkenyl succinic acid or alkyl, alkaryl, aralkyl, or alkenyl succinic anhydride.

IPC 1-7

C10M 137/02; C10M 137/12; C10M 169/04; C10M 173/00; C10N 40/24

IPC 8 full level

C07F 9/09 (2006.01); **C07F 9/141** (2006.01); **C07F 9/53** (2006.01); **C10M 137/02** (2006.01); **C10M 137/04** (2006.01); **C10M 137/12** (2006.01); **C10M 159/12** (2006.01); **C10M 169/04** (2006.01); **C10M 173/00** (2006.01); C10N 30/06 (2006.01); C10N 40/24 (2006.01)

CPC (source: EP)

C07F 9/091 (2013.01); **C07F 9/1411** (2013.01); **C07F 9/5304** (2013.01); **C10M 105/32** (2013.01); **C10M 107/02** (2013.01); **C10M 107/08** (2013.01); **C10M 107/34** (2013.01); **C10M 137/02** (2013.01); **C10M 137/12** (2013.01); **C10M 169/04** (2013.01); **C10M 173/00** (2013.01); C10M 2201/02 (2013.01); C10M 2205/00 (2013.01); C10M 2205/0206 (2013.01); C10M 2205/026 (2013.01); C10M 2205/0265 (2013.01); C10M 2207/125 (2013.01); C10M 2207/129 (2013.01); C10M 2207/2805 (2013.01); C10M 2207/281 (2013.01); C10M 2207/282 (2013.01); C10M 2207/283 (2013.01); C10M 2207/286 (2013.01); C10M 2207/345 (2013.01); C10M 2209/103 (2013.01); C10M 2209/1033 (2013.01); C10M 2209/104 (2013.01); C10M 2209/1045 (2013.01); C10M 2209/1055 (2013.01); C10M 2209/1065 (2013.01); C10M 2209/1075 (2013.01); C10M 2209/1085 (2013.01); C10M 2209/1095 (2013.01); C10M 2223/02 (2013.01); C10M 2223/04 (2013.01); C10M 2223/041 (2013.01); C10M 2223/042 (2013.01); C10M 2223/043 (2013.01); C10M 2223/045 (2013.01); C10M 2223/049 (2013.01); C10M 2223/06 (2013.01); C10M 2223/061 (2013.01); C10M 2223/10 (2013.01); C10N 2010/04 (2013.01); C10N 2010/08 (2013.01); C10N 2010/12 (2013.01); C10N 2040/20 (2013.01); C10N 2040/24 (2013.01); C10N 2040/241 (2020.05); C10N 2040/242 (2020.05); C10N 2040/243 (2020.05); C10N 2040/244 (2020.05); C10N 2040/245 (2020.05); C10N 2040/246 (2020.05); C10N 2040/247 (2020.05); C10N 2050/01 (2020.05)

Cited by

CN113416591A; CN112662448A; US6706670B2; CN110914391A; EP3744818A4; US11542455B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0389967 A2 19901003; **EP 0389967 A3 19910109**; AU 5221690 A 19900927; BR 9001397 A 19910409; CA 2013027 A1 19900927; JP H02298589 A 19901210; NO 901322 D0 19900322; NO 901322 L 19900928

DOCDB simple family (application)

EP 90105454 A 19900322; AU 5221690 A 19900326; BR 9001397 A 19900327; CA 2013027 A 19900326; JP 7856890 A 19900327; NO 901322 A 19900322